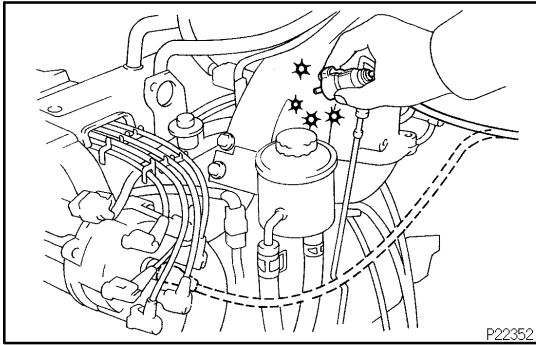




IGNITION SYSTEM ON-VEHICLE INSPECTION

IG01B-02

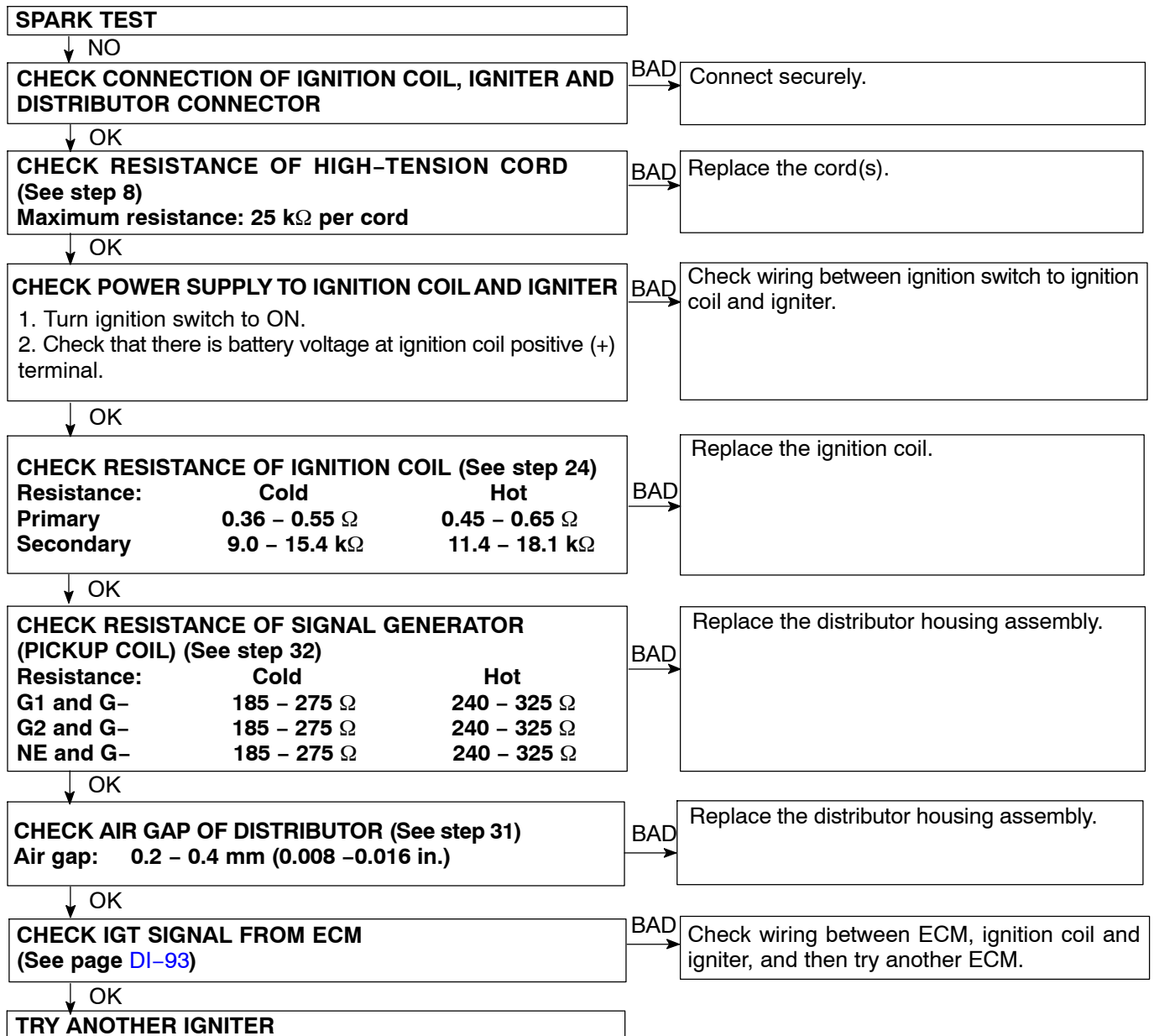
1. CHECK THAT SPARK OCCURS

- Disconnect the high-tension cords (from the ignition coil) from the distributor cap.
- Hold the end approx. 12.5 mm (0.50 in.) from the body ground.
- Check if spark occurs while engine is being cranked.

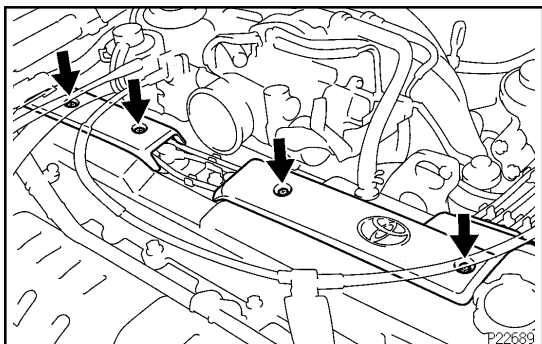
HINT:

To prevent gasoline from being injected from injectors during this test, crank the engine for no more than 1 – 2 seconds at a time.

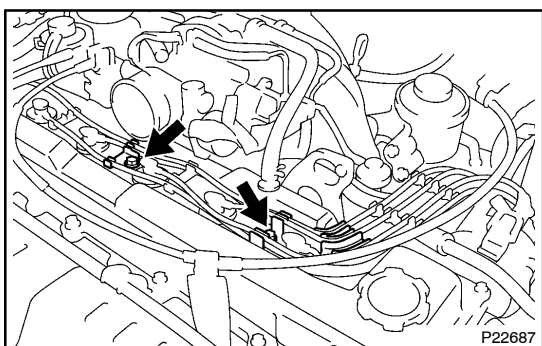
If the spark does not occur, do the test as follows:



2. REMOVE NO.2 PCV HOSE
3. REMOVE AIR CLEANER HOSE
4. DISCONNECT THROTTLE CABLE

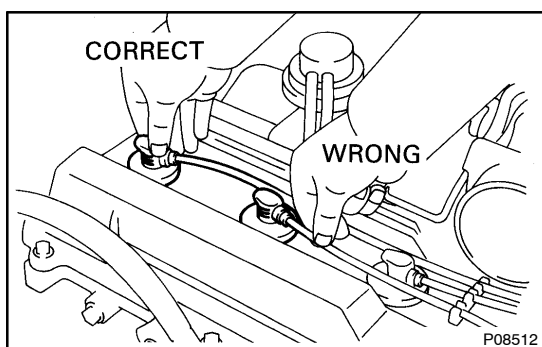


5. REMOVE NO.2 AND NO.3 CYLINDER HEAD COVERS
Remove the 4 bolts and head covers.



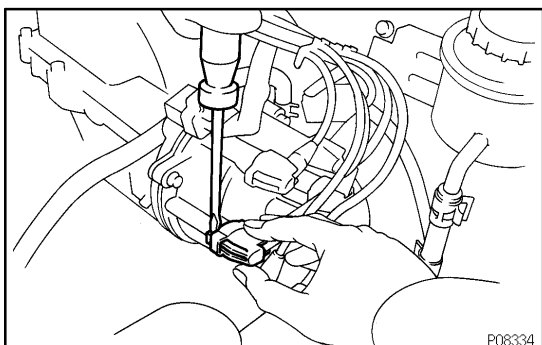
6. DISCONNECT HIGH-TENSION CORDS FROM SPARK PLUGS

- (a) Remove the 2 mounting bolts of the No.1 and No.2 cord clamps.



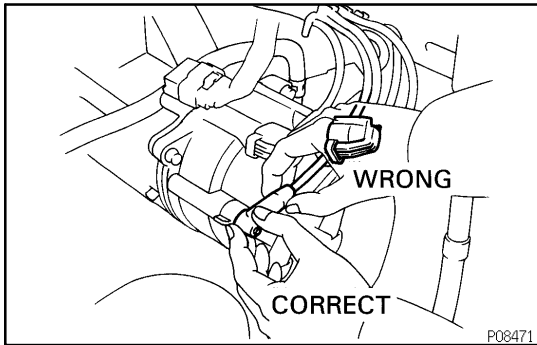
- (b) Disconnect the high-tension cords at the rubber boot.
Do not pull on the cords.

NOTICE:
Pulling on or bending the cords may damage the conductor inside.



7. DISCONNECT HIGH-TENSION CORDS FROM DISTRIBUTOR CAP AND IGNITION COIL

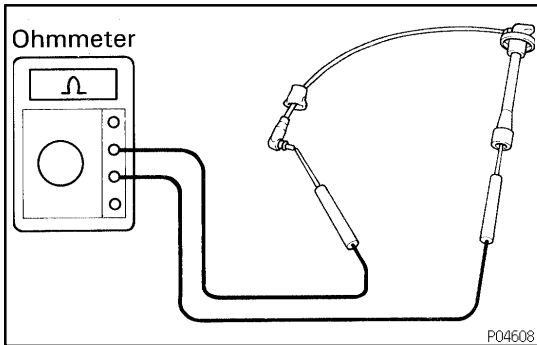
- (a) Using a screwdriver, lift up the lock claw and disconnect the holder from the distributor cap (ignition coil).



- (b) Disconnect the high-tension cord at the grommet.
Do not pull on the cord.

NOTICE:

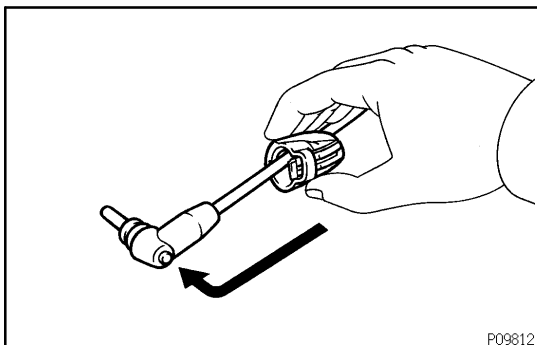
Pulling on or bending the cords may damage the conductor inside. Do not wipe any of the oil from the grommet after the high-tension cord is disconnected.

**8. INSPECT HIGH-TENSION CORD RESISTANCE**

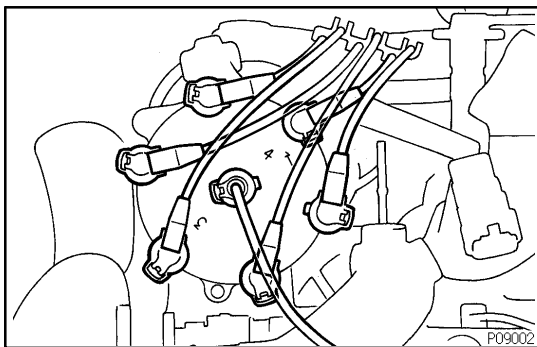
Using an ohmmeter, measure the resistance.

Maximum resistance: 25 kΩ per cord

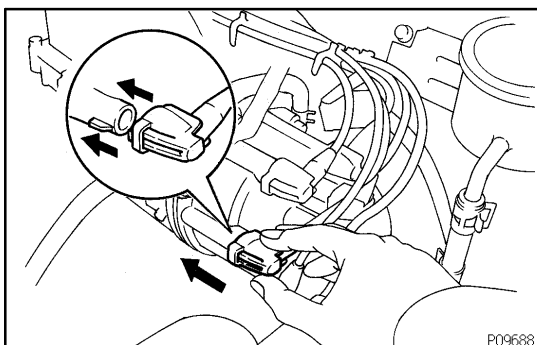
If the resistance is greater than maximum, check the terminals.
If necessary, replace the high-tension cord.

**9. RECONNECT HIGH-TENSION CORDS TO DISTRIBUTOR CAP AND IGNITION COIL**

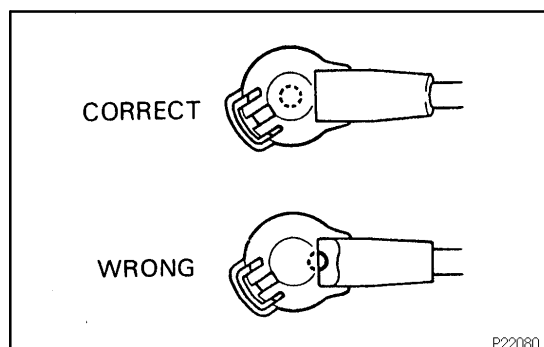
- (a) Assemble the holder and grommet.

**HINT:**

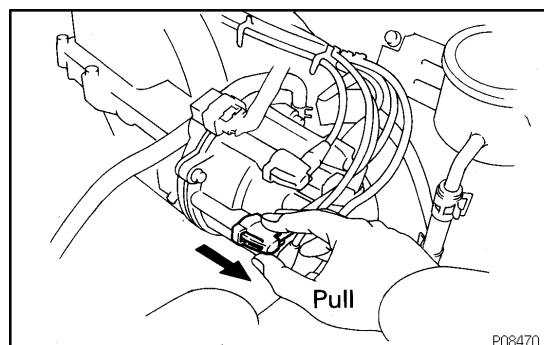
Connect the high-tension cords to the distributor cap as shown in the illustration.



- (b) Align the spline of the distributor (ignition coil) with the spline of the holder, and push in the cord.

**NOTICE:**

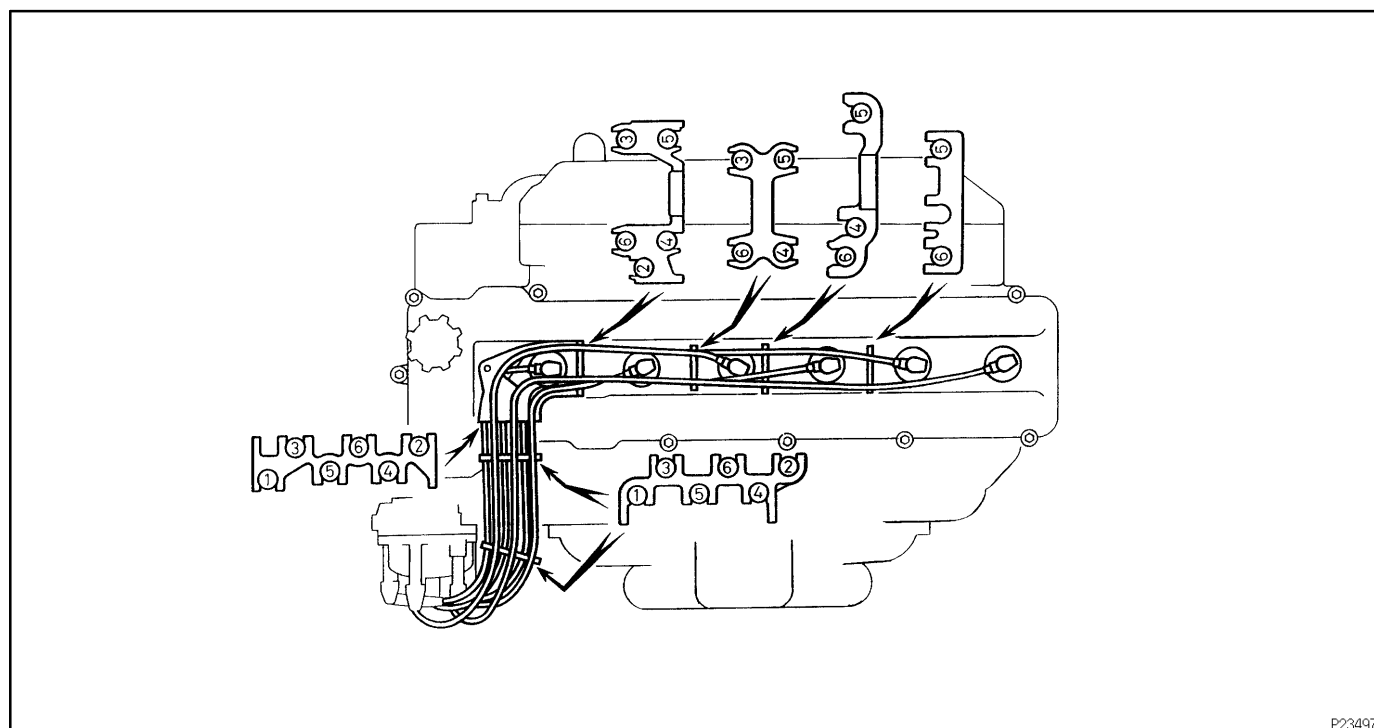
Check that the holder is correctly installed to the grommet and distributor cap as shown in the illustration.

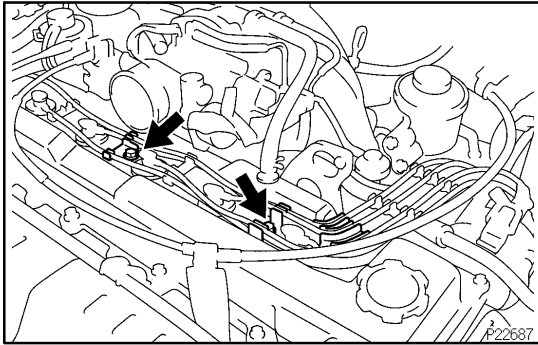


- (c) Check that the lock claw of the holder is engaged by lightly pulling the holder.

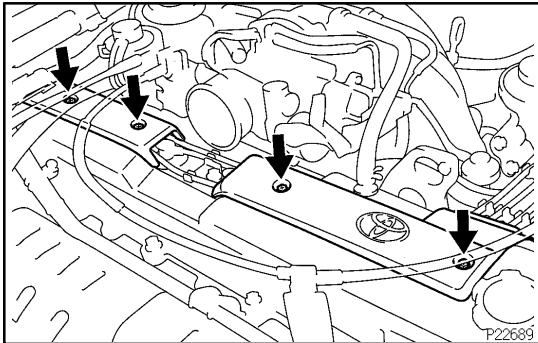
10. RECONNECT HIGH-TENSION CORDS TO SPARK PLUGS

- (a) Secure the high-tension cords with the cord clamps as shown in the illustration.





- (b) Install the No.1 and No.2 cord clamps with the 2 bolts.



11. INSTALL NO.2 AND NO.3 CYLINDER HEAD COVERS

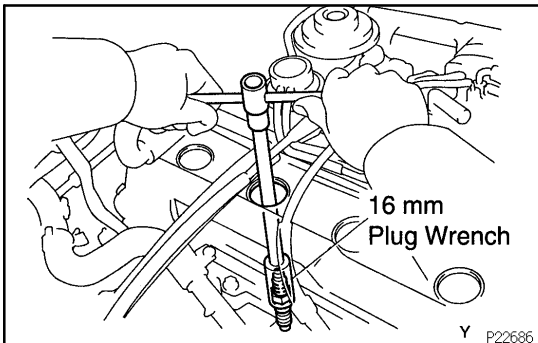
Install the head covers with the 4 bolts.

12. CONNECT THROTTLE CABLE

13. INSTALL AIR CLEANER HOSE

Install the air cleaner hose with the 2 clamp bolts.

14. INSTALL NO.2 PCV HOSE



15. DISCONNECT HIGH-TENSION CORDS FROM SPARK PLUGS

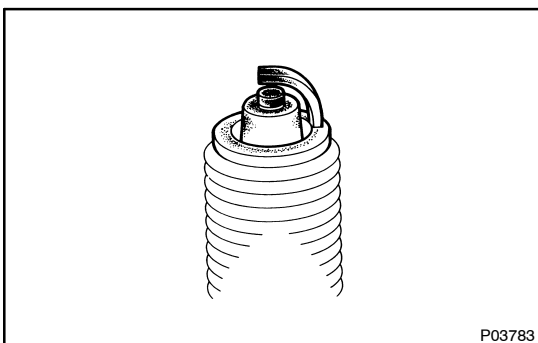
16. REMOVE SPARK PLUGS

Using a 16 mm plug wrench, remove the spark plug.



17. CLEAN SPARK PLUGS

Using a spark plug cleaner or wire brush, clean the spark plug.



18. VISUALLY INSPECT SPARK PLUGS

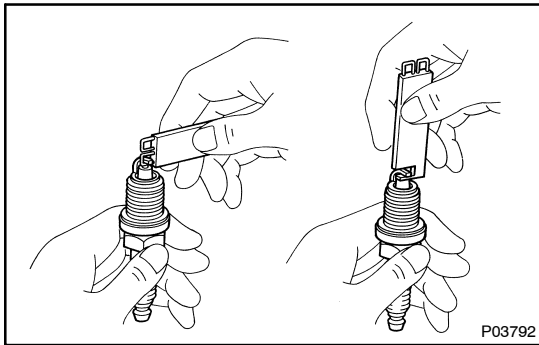
Check the spark plug for electrode wear, threads damage and insulator damage.

If abnormal, replace the plugs.

Recommended spark plugs:

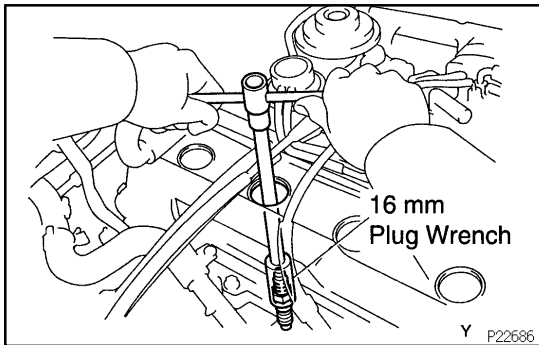
ND: K16R-U

NGK: BKR5EYA

**19. ADJUST ELECTRODE GAP**

Carefully bend the outer electrode to obtain the correct electrode gap.

Correct electrode gap: 0.8 mm (0.031 in.)

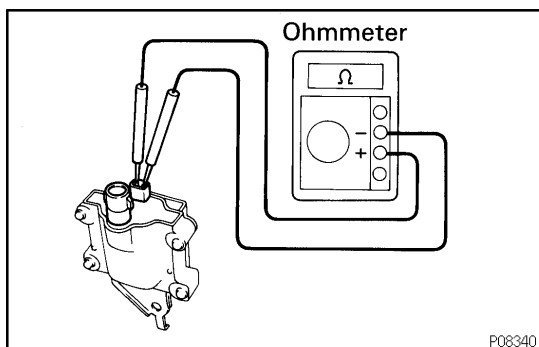
**20. INSTALL SPARK PLUGS**

Using a 16 mm plug wrench, install the spark plug.

Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)

21. RECONNECT HIGH-TENSION CORDS TO SPARK PLUGS**NOTICE:**

"Cold" and "Hot" in the following sentences express the temperature of the coils themselves. "Cold" is from -10°C (14°F) to 50°C (122°F) and "Hot" is from 50°C (122°F) to 100°C (212°F).

22. DISCONNECT IGNITION COIL CONNECTOR**23. DISCONNECT HIGH-TENSION CORD****24. INSPECT PRIMARY COIL RESISTANCE**

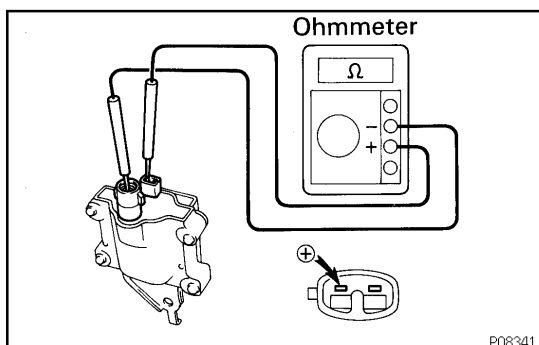
Using an ohmmeter, measure the resistance between the positive (+) and negative (-) terminals.

Primary coil resistance:

Cold: 0.36 – 0.55 Ω

Hot: 0.45 – 0.65 Ω

If the resistance is not as specified, replace the ignition coil.

**25. INSPECT SECONDARY COIL RESISTANCE**

Using an ohmmeter, measure the resistance between the positive (+) and high-tension terminals.

Secondary coil resistance:

Cold: 9.0 – 15.4 k Ω

Hot: 11.4 – 18.1 k Ω

If the resistance is not as specified, replace the ignition coil.

26. RECONNECT HIGH-TENSION CORD**27. RECONNECT IGNITION COIL CONNECTOR**

NOTICE:

"Cold" and "Hot" in the following sentences express the temperature of the coils themselves. "Cold" is from -10°C (14°F) to 50°C (122°F) and "Hot" is from 50°C (122°F) to 100°C (212°F).

28. DISCONNECT DISTRIBUTOR CONNECTOR

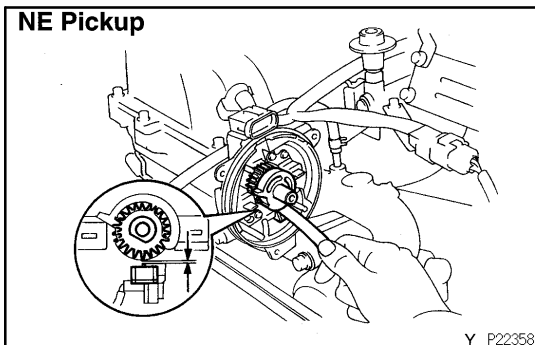
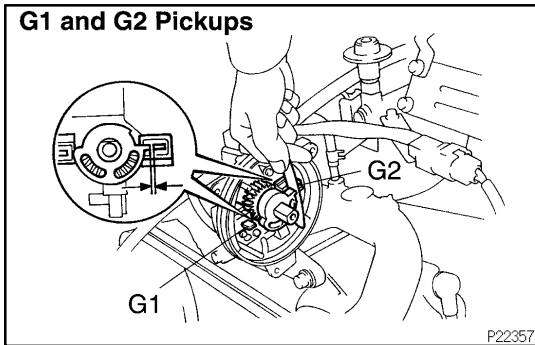
29. REMOVE DISTRIBUTOR CAP WITHOUT DISCONNECTING HIGH-TENSION CORDS

30. REMOVE ROTOR

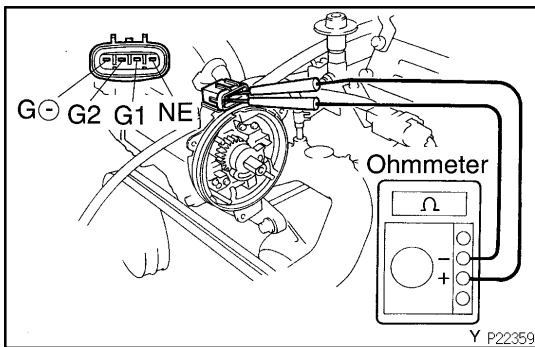
31. INSPECT AIR GAPS

Using a thickness gauge, measure the gap between the signal rotor and the pickup coil projection.

Air gap: 0.2 – 0.4 mm (0.008 – 0.016 in.)



If the gap is not as specified, replace the distributor housing.



32. INSPECT SIGNAL GENERATOR (PICKUP COIL) RESISTANCE

Using an ohmmeter, check that the resistance of the pickup coil.

Pickup coil resistance:

Cold	G1 and G $\ominus$	185 – 275 Ω
	G2 and G $\ominus$	185 – 275 Ω
	NE and G $\ominus$	185 – 275 Ω
Hot	G1 and G $\ominus$	240 – 325 Ω
	G2 and G $\ominus$	240 – 325 Ω
	NE and G $\ominus$	240 – 325 Ω

If the resistance is not as specified, replace the distributor housing.

33. REINSTALL ROTOR

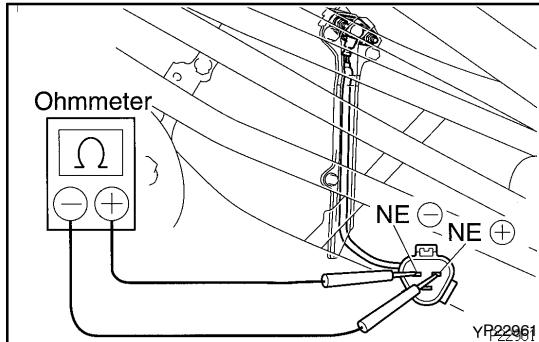
34. REINSTALL DISTRIBUTOR CAP

35. RECONNECT DISTRIBUTOR CONNECTOR

NOTICE:

"Cold" and "Hot" in the following sentences express the temperature of the sensor itself.

"Cold" is from -10°C (14°F) to 50°C (122°F) and "Hot" is from 50°C (122°F) to 100°C (212°F).

36. DISCONNECT CRANKSHAFT POSITION SENSOR CONNECTOR AND BRACKET**37. INSPECT CRANKSHAFT POSITION SENSOR RESISTANCE**

Using an ohmmeter, measure the resistance between the terminals.

Resistance (NE $\oplus$ - NE $\ominus$):

Cold: 1,630 - 2,740 Ω

Hot: 2,065 - 3,225 Ω

If the resistance is not as specified, replace the crankshaft position sensor.

38. RECONNECT CRANKSHAFT POSITION SENSOR BRACKET AND CONNECTOR